

CLAIMS

1. A device for locking a position of a moving part (2) with respect to a fixed part (1), the moving part 5 (2) being positioned with respect to the fixed part (1) isostatically, the device being characterized in that it comprises means (50, 58, 60) generating a force (F, F1) opposing the loss of contact of all the points (61 to 66) of isostatic contact between the moving part (2) 10 and the fixed part (1) so as to lock the position.
2. The device as claimed in claim 1, characterized in that, in order to provide isostatic positioning, the device comprises a female dovetail (30) belonging to 15 the fixed part (1) and a male dovetail (45) belonging to the moving part (2), in that the bases (31, 46) of the two dovetails (30, 45) are in contact and define three first isostatic points (61, 62, 63) and in that two inclined faces (33, 49) in contact, each belonging 20 to one of the dovetails (30, 45), define the forth and fifth isostatic points (64, 65).
3. The device as claimed in claim 2, characterized in that the sixth isostatic point (66) stops translation 25 of the two dovetails (30, 45), one with respect to the other, and in that the sixth point (66) is formed between a face (37) belonging to the fixed part (1), which face is inclined with respect to the base (31) of the female dovetail (30) and distinct from the inclined 30 faces (32, 33) of the female dovetail (30), and a point (47) on the moving part (2) coming into abutment with this face (42).
4. The device as claimed in either of claims 2 and 3, 35 characterized in that the direction of the force (F, F1) is parallel to the bases (31, 46) of the dovetails (30, 45).

5. The device as claimed in claims 3 and 4, characterized in that the moving part (2) has a finger (50) that can move in translation with respect to the moving part (2) and is intended to bear against a surface (60, 67) of the fixed part (1), and in that the position and orientation of the surface (60, 67) are defined so that the force is directed between the fourth and fifth isostatic points (64, 65) on the one hand, and the sixth isostatic point (67) on the other hand.

6. The device as claimed in claim 5, characterized in that near the contact between the finger (50) and the surface (60, 67), the finger (50) is roughly convex and the surface (60, 67) is roughly planar.

7. The device as claimed in claim 5, characterized in that an elastic element (58) tends to press the finger (50) against the surface (60) in such a way that the force (F) maintains the contact of the six isostatic point (60 to 66).

8. The device as claimed in any of claims 5 to 7, characterized in that the fixed part (1) comprises means (40) for compressing the elastic element (58, 59) when the moving part (2) nears its isostatic position with respect to the fixed part (1) without any external action other than the action necessary for the bringing-together being needed to compress the elastic element (58, 59).

9. The device as claimed in any of claims 5 to 8, characterized in that the translational movement of the finger (50) with respect to the moving part (2) is limited in both the directions of the translational movement.

10. The device as claimed in any of claims 5 to 9, characterized in that the orientation of the surface

(6) and the coefficient of friction of the finger (50) with respect to the surface (60) are defined such that only a force tending to compress the elastic element (58) can move the moving part (2) with respect to the 5 fixed part (1).

11. The device as claimed in any of claims 2 to 10, characterized in that it further comprises additional means (57) opposing the loss of contact of the fourth 10 and fifth isostatic points (64, 65).

12. The device as claimed in claim 11, characterized in that the additional means comprise a facet (57) belonging to the moving part (2) and pressing against 15 the opposite inclined face (32) of the female dovetail (30) to the inclined face (33) of the female dovetail (30) that defines the fourth and fifth isostatic points (64, 65).

20 13. The device as claimed in claim 12, characterized in that the facet (57) belongs to an element (3) that can move in translation with respect to the moving part (2) along an axis (51) roughly perpendicular to the axis (41) of travel of the dovetails (30, 45) one with 25 respect to the other, and in that the moving element (3) is connected to the moving part (2) by a second elastic element (59).

30 14. The device as claimed in claims 5 and 13, characterized in that the axis (51) of translation of the finger (50) is coincident with the axis of translation of the moving element (3) and in that the second elastic element (59) tends to separate the moving element (3) from the finger (50).
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15. The device as claimed in claim 14, characterized in that the translational movement of the finger (50) of the moving element (3) is guided by means of a second female dovetail (54) belonging to the moving

part (2) in which there slides a second male dovetail (56) secured to the finger (50) and a third male dovetail (55) belonging to the moving element (3).

5 16. The device as claimed in either of claims 14 and 15, characterized in that the moving part (2) is unlocked with respect to the fixed part (1) by exerting a force on the moving element (3) in the direction of the fourth and fifth isostatic points (64, 65).

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17. The device as claimed in any of claims 14 to 16, characterized in that the stiffness of the elastic element (58) is greater than the stiffness of the second elastic element (59).

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